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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,765	04/30/2001	Akihiro Sanda	Q63763	9192

7590 09/17/2007
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037-3213

EXAMINER

PRONE, JASON D

ART UNIT	PAPER NUMBER
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3724

MAIL DATE	DELIVERY MODE
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09/17/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/843,765

Applicant(s)

SANDA ET AL.

Examiner

Jason Prone

Art Unit

3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 8-14 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 7, 16, 17, 19, 20 and 24-26 is/are allowed.
- 6) ☒ Claim(s) 6, 18 and 21-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4/30/01 & 9/4/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 6, 18, and 21-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The addition of the limitation "wherein the irregularities include plural periodicity" is new matter. The period is the space between the irregularities, the specification does not provide any support for the irregularities having include plural periodicity. The specification does provide support for there being a period but does not disclose any specifics with respect to this period.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6, 18, and 21-23 are rejected, as best understood, under 35 U.S.C. 103(a) as being unpatentable over Potsch et al. (3,788,180) in view of Wingen (4,275,631). See Appendix A for examiner added reference numerals. Potsch et al.

Art Unit: 3724

discloses the invention including a drum-shaped rotary blade (53), a disk shaped rotary blade (68), that the rotary blade has a cutting edge (Fig. 9), a first beveled surface facing the drum-shaped rotary blade and progressively spaced from the drum-shaped rotary blade toward the cutting edge (68'), a second beveled surface facing the work piece and progressively spaced from the cutting edge away from the work piece (200), a plurality of disk-shaped rotary blades (68), and wherein the disk-shaped rotary blade is one of a plurality of a disk-shaped rotary blades (Fig. 2).

However, Potsch et al. fail to disclose that the disk-shaped rotary blade has irregularities along a circumference of the blade, the irregularities have an irregularity quantity set to a value which ranges from 0.5 μ m to 5 μ m, the irregularities have one of saw-tooth shaped and undulating shape, the irregularity quantity is substantially along a radial direction of the disk-shaped rotary blade perpendicular to the rotational axis, the irregularity quantity being a distance from a bottom to a top of one of the irregularities, the drum-shaped rotary blade comprises a plurality of grooves, each of the plurality of disk-shaped rotary blades corresponding to one of the plurality of grooves, and wherein the plurality of grooves are disposed on a surface of the drum-shaped rotary blade.

Wingen teaches that it is old and well known in the art of slitter blades to incorporate blades with irregularities (Column 4, lines 6-10). The examiner takes Official notice that it is old and well known for all blades to have irregularities. It is also known that all items being manufactured will have irregularities to some extent. It is also known that irregularities come in extremely small sizes and in undulating shapes with plural periodicity. It is old and well known to have the surface as smooth as

Art Unit: 3724

possible making the irregularities as small as possible therefore it would have been obvious to one skilled in the art to have made the irregularities within the claimed range. Wingen also teaches the irregularity quantity is substantially along a radial direction of the disk-shaped rotary blade perpendicular to the rotational axis (Column 4, lines 6-10). It is old and well known that irregularities occur on any surface in manufacturing of disk-shaped materials or any other materials. Wingen teaches that it is old and well known in the art of slitter blades the drum-shaped rotary blade comprises a plurality of grooves (14), each of the plurality of disk-shaped rotary blades corresponding to one of the plurality of grooves (Fig. 3), and wherein the plurality of grooves are disposed on a surface of the drum-shaped rotary blade (Fig. 3). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have concluded Potsch et al. incorporates irregularities, in light of Wingen, because it is old and well known that all items include irregularities.

Response to Arguments

5. Applicant's arguments with respect to Applicant's arguments filed 04 September 2007 have been fully considered but they are not persuasive. The new limitation is considered new matter. Also, the examiner recommends claiming the cutting edge and the irregularities as one. Meaning, claim a cutting edge having an undulating shape with the claimed range.

Allowable Subject Matter

6. Claims 1-5, 7, 15-17, 19, 20, and 24-26 are allowed.

Art Unit: 3724

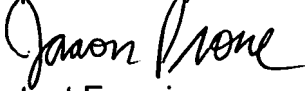
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Prone whose telephone number is (571) 272-4513. The examiner can normally be reached on 8:00-5:30, Mon - (every other) Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer D. Ashley can be reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

September 13, 2007


Patent Examiner
Jason Prone
Art Unit 3724
T.C. 3700